

Date: Wednesday, 10/11/2006 10:26:37 AM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: FLOAT SKID LH
Job Number	: 28890		
Estimate Number	: 12549		
P.O. Number	:	Part Number	: D206642513
This Issue	: 10/11/2006 S.O. No. :	Drawing Number	: IIN D206-642 REV J
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : LANDING GEAR	Drawing Revision	: J
Previous Run	:	Material	:
Written By	: <u>                    </u>	Due Date	: 11/5/2006 Qty: 1 Um: Each
Checked & Approved By	: <u>                    </u>		
Comment	: Est Rev:A New Issue 06-10-06 JLM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels per PPP D206-642-513 CHG001

CHG002

08/04/30

08/4/30 JLD

2.0

28890A

FLOAT SKIDTUBE ASSEMBLY



Comment: Sub-Component FLOAT SKIDTUBE ASSEMBLY

D206-642-545

Batch: 28890A

JLD

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

4.0

D206648013

GHW Kit



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D206-648-013 GHW Kit

374/18

1 D206-642-541(REF)

28890A

5.0

D2652

Bushing



Comment: Qty.: 16.0000 Each(s)/Unit Total: 16.0000 Each(s)

Pick:

Qty Part Number Description Batch

16 D2652

Bushing

B 38745

08/4/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID LH

Job Number: 28890

Part Number: D206642513

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

D2712

Set Screw



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

10 D2712

Set Screw

34628

7.0

D29321

206 Saddle Left side



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2932-1

Saddle

35226

8.0

D29331

206 Saddle Left



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2933-1

Saddle

37866

9.0

D2934

Saddle Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 D2934

Saddle Spacer

B 37368

10.0

D2935

Saddle Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 D2935

Saddle Spacer

37867

11.0

D29381

206 Saddle Left side



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2938-1

Saddle

B 34603

8/4/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID LH

Job Number: 28890

Part Number: D206642513

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

D29391

206 Saddle Left side



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2939-1

Saddle

B34632

*Handwritten signature*

13.0

D3407043

Tow Ring



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3407-043

Tow Ring

B37372

*Handwritten signature*

14.0

D34561

washer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D3456-1

Washer

B33276

*Handwritten signature*

15.0

AN3C7A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

BOLT

Batch:

M105906

*Handwritten signature*

16.0

D34571

Inventory



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 D3457-1

Washer

B37123

*Handwritten signature*

17.0

AN3C35A



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

3 AN3C35A

Bolt

M107463

*Handwritten signature and date: 8/4/30 (11)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID LH

Job Number: 28890

Part Number: D206642513

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

AN3C36A



Comment: Qty.: 34.0000 Each(s)/Unit Total : 34.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

34 AN3C36A

Bolt

M116541

*[Signature]*

19.0

AN3C41A



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

AN3C41A

Batch:

M107463

*[Signature]*

20.0

AN4C6A

Bolt



Comment: Qty.: 12.0000 Each(s)/Unit Total : 12.0000 Each(s)

Bolt

M106819

*[Signature]*

21.0

AN5C11A



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

8 AN5C11A

Bolt

M107013

*[Signature]*

22.0

AN5C15A

Bolt



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 AN5C15A

Bolt

M105125

*[Signature]*

23.0

AN5C32A



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 AN5C32A

Bolt

M105746

*[Signature]* 8/4/30 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID LH

Job Number: 28890

Part Number: D206642513

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

AN5C34A



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 AN5C34A

Bolt

M107289

*[Signature]*

25.0

AN5C35A



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 AN5C35A

Bolt

M107557

*[Signature]*

26.0

AN960C10L

washer



Comment: Qty.: 78.0000 Each(s)/Unit Total : 78.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

78 AN960C10L

Washer

M107321

43X  
M107534 30X

*[Signature]*

27.0

AN960C416L

WASHER



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

24 AN960C416L

Washer

M107008

*[Signature]*

28.0

AN960C516L

WASHER



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

8 AN960C516L

Washer

M103344

10/4/30 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID LH

Job Number: 28890

Part Number: D206642513

Job Number:



Seq. #:

Machine Or Operation:

Description :

29.0

MS210433

Nut



Comment: Qty.: 49.0000 Each(s)/Unit Total : 49.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

49 MS21043-3

Nut M107388

30.0

MS210434

Nut



Comment: Qty.: 13.0000 Each(s)/Unit Total : 13.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

13 MS21043-4

Nut M107101

31.0

MS210435

Nut



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

4 MS21043-5Nut M106763

32.0

NAS1515H3L

WASHER



Comment: Qty.: 78.0000 Each(s)/Unit Total : 78.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

78 NAS1515H3L

Washer

M1033258P

M10579310X

M1073242PX

M1956518X

M1969910X

33.0

NAS1515H4L

Inventory



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

24 NAS1515H4L

Washer

M107008

M1084430 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID LH

Job Number: 28890

Part Number: D206642513

Job Number:



Seq. #:

Machine Or Operation:

Description :

34.0

NAS1515H5L

WASHER



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

8 NAS1515H5L

Washer

M/100680 3X M/105792 3X M/106541 2X

35.0

NAS1515H5

Washer



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

16 NAS1515H5

Washer

M/101064 15X M/108925 1X

36.0

D33963

Inventory



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Spacer

Batch:

33336

37.0

D34521

Bracket



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bracket

Batch:

28950

38.0

D34523

Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Bracket

Batch:

28901

39.0

MS21919WDG28

Inventory



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Clamp

Batch:

18847

Ref/30 (1)

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 10/11/2006 10:26:38 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKID LH

Job Number: 28890

Part Number: D206642513

Job Number:



Seq. #:

Machine Or Operation:

Description :

40.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

08/04/30 HC

41.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D206-642-511

Location: Rev A

8/4/30

1x

SP

42.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/05/01

Job Completion



mf 08-05-01

28890 A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

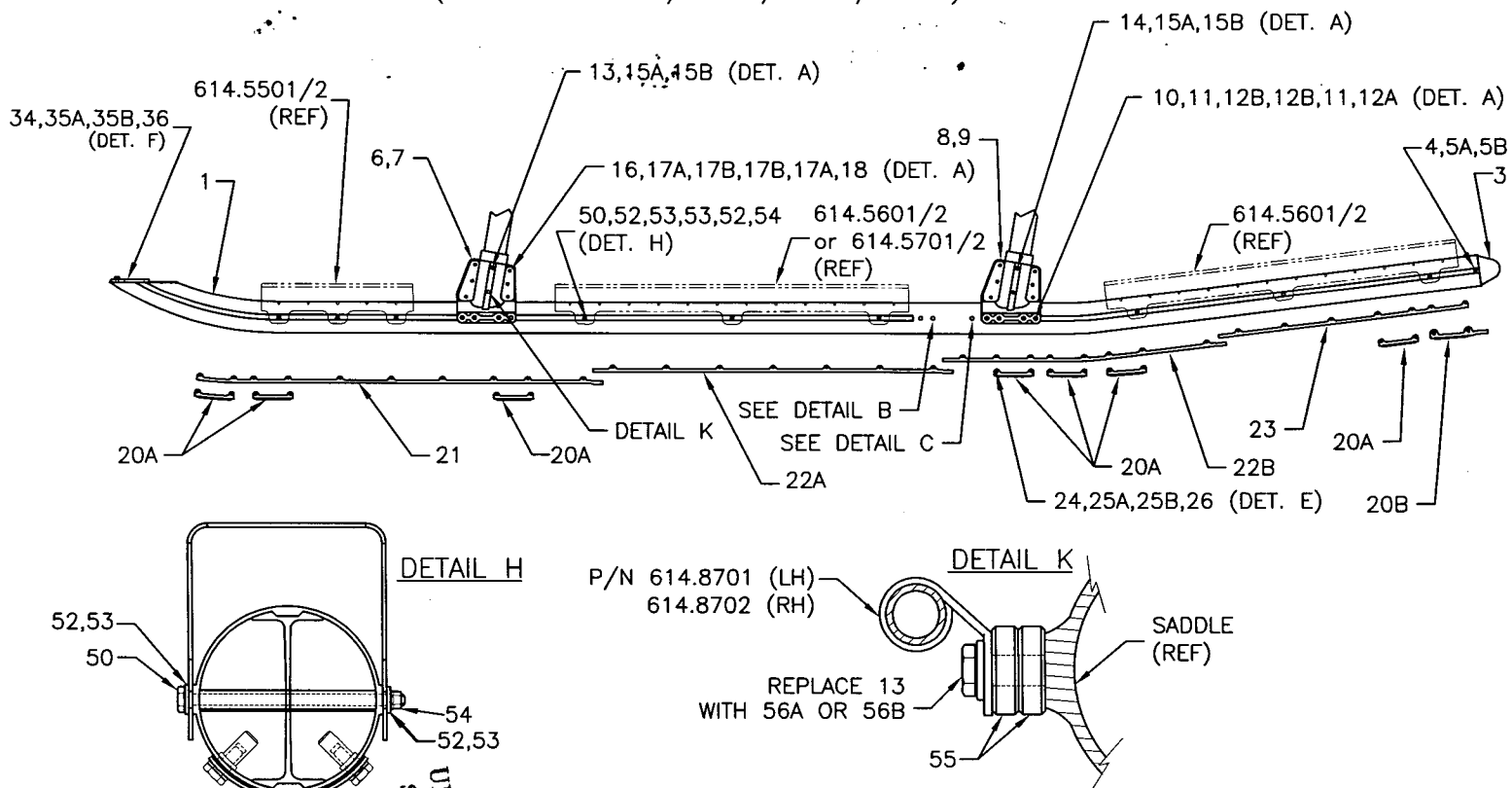
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



206 A/B FLOAT SKIDTUBES (TRI-BAG FLOATS)  
(D206-642-611/-612/-613/-614)



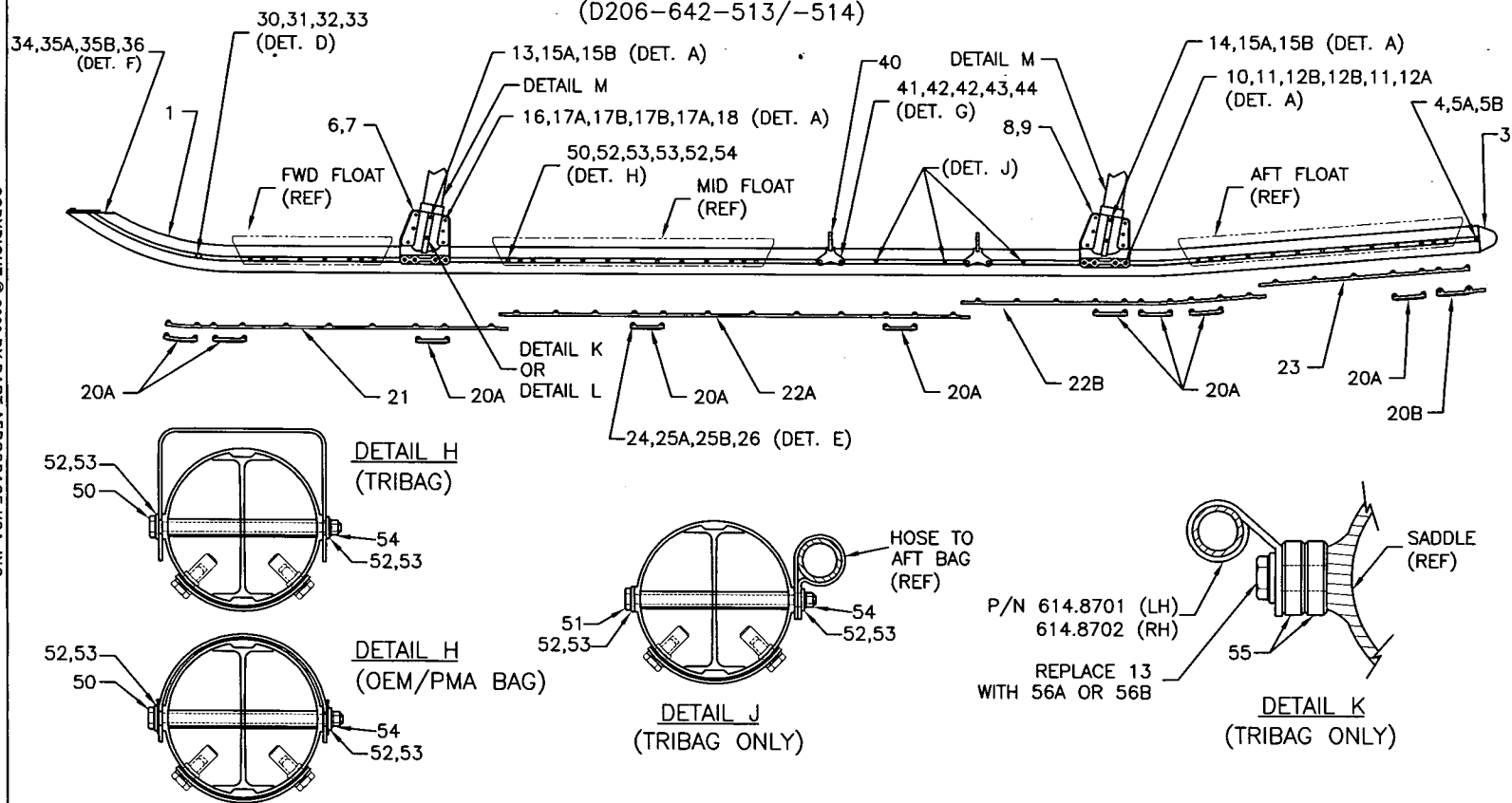
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Revision: J  
Date: 05.08.30

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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 28890

206 L/L-1/L-3/L-4/407 FLOAT SKIDTUBES (OEM/PMA or TRIBAG FLOATS)  
(D206-642-513/-514)



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Date: 05.08.30

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WITHOUT NOTICE  
WORK ORDER  
NO. 28870

Date: Wednesday, 10/11/2006 10:27:54 AM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services  
 Job Number : 28890A  
 Estimate Number : 12548  
 P.O. Number :  
 This Issue : 10/11/2006 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : / / Type : LANDING GEAR  
 Previous Run :  
 Written By :  
 Checked & Approved By : 06 10 11  
 Comment : Est Rev: A New Issue 06-10-06 JLM

Drawing Name : FLOAT SKIDTUBE ASSEMBLY  
 Part Number : D206642545  
 Drawing Number : D3274 REV C  
 Project Number : N/A  
 Drawing Revision : C  
 Material :  
 Due Date : 11/5/2006 Qty: 1 Um: Each

*Rev D*  
*PH*  
*07.04.25*

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile &amp; type labels per PPP D206-642-545 CHG001

*NIA*  
*07-03-08*

2.0

D26001240

Extrusion Round 3" 206



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2600-1-240 3" OD Tube

*B31032*  
*DP 2-10-13*  
*07-03-08*

3.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut D2600-1 to 190.00" in length as per Dwg D3274 and Deburr ends

2-Drill #40 Aft cap pilot hole using DT8025

3-Cleco DT8025 in position and install pilot hole drill Jig DT8891 A,BC &amp; D Drill 3/16" &amp; 1/8" pilot holes as per Dwg D3274

4-Remove inner indexing ridge on aft end of skidtube as per Dwg D3274

5-Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

*DP*  
*7-5-8*  
*DP*  
*7-10-17*  
*PTO*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-6A2-545 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>28890A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
7-5-8	3	Scrapped ① D2600-1-240 while making 1 <sup>st</sup> Article. Tooling was off.	<i>[Signature]</i> RS1412	Repair Tooling, Scrap + Replace. Attach both copies of FAI's.	<i>[Signature]</i> 7-10-17	<i>[Signature]</i> 08/06/17	<i>[Signature]</i> RS1412	<i>[Signature]</i> 08/06/17

NOTE: Date & initial all entries

Date: Wednesday, 10/11/2006 10:27:54 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description:

4.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid Etch and Alodine tube as per QSI 005 4.1

DP 7-10-17

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BE 7-10-17

6.0

D3282041

I-Beam



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D3282-041 Float Web

37052

SL 8-4-7

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open 1/8" PILOTS TO Ø0.313" crossbolt spacer holes as per Dwg D3274

2-Open 3/16" Pilots to Ø0.375" crossbolt spacer holes as per Dwg D3274

3-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

4-Bond web in place as per Dwg D3274 & QSI 015.

A/R Sikaflex-291

107397

Sikaflex expire date:

8-7-31

Start:

8-4-7

Time:

1:30

Finish:

8/4/06

Time:

9:30AM

(Adhere for 12 hours)

DP 7-10-17  
SL 8-4-7

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 08/04/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D206-642-545 PAR #: N/A Fault Category: Prod / Sk dtube NCR: Yes No DQA: D Date: 08/04/10  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>28890A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08.04.10	9	FWD BEND SHIFTED AFT BY APPROX 1".	CP 08.04.10 PZ 08/04/10	CUT @ 7.500" HIGH. TUBE IS 0.862" 170.5" LONG. TUBE ACCEPTABLE.	EL 8/4/10	(S) 08/04/10 PZ 08/04/10	CP 08.04.10 PZ 08/04/10	(S) 08/04/10

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description:

9.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Bend tube using program D3274 as per Dwg D3274. Install drop pins in cross bolt spacer holes to maintain web position.

2-Cut Fwd end of tube to length as per Dwg D3274

3-Remove inner indexing ridge on Fwd end of skidtube as per Dwg D3274

4- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2  
OPEN HOLES TO .1875

5- C'SINK WITH 3/16 C'SINK BIT (ENSURE NOT TO C'SINK TO DEEP)

6- OPEN HOLES TO .257 AS PER DRWG D3274

7- FINISH C'SINK WITH .257 C'SINK BIT (ENSURE NOT TO C'SINK PAST THE BOTTOM, ONLY CUT THE TOP) AND INSPECT C'SINK WITH A SAMPLE NAS1330C3KB116 INSERT TO ENSURE INSERTS WILL SIT FLUSH, AND HOLE IS NOT OVERSIZED

8- DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)  
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

9- Countersink crossbolt spacer holes as per Dwg D3274

8-4-10  
P.70  
P.71  
P.72

8-4-11

10.0

D32851

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D3285-1 Fwd Cap

335902

BE 08/04/21

11.0

D2649

Crossbolt Spacer



Comment: Qty.: 12.0000 Each(s)/Unit Total: 12.0000 Each(s)

Pick:

Qty Part Number Description Batch

12 D2649 Crossbolt spacer

37329

BE 08/04/21

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<del>3-11-10</del>	<del>6</del>							

**NOTE:** Date & initial all entries



Date: Wednesday, 10/11/2006 10:27:55 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

D32751

Crossbolt Spacer



Comment: Qty.: 37.0000 Each(s)/Unit Total : 37.0000 Each(s)

Pick:

Qty Part Number Description Batch

37 D3275-1 Crossbolt spacer

B 35210

BE 08/04/21

13.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Weld Fwd Cap as per Dwg D3274 and QSI 004. Use aluminum rod.

A/R Aluminum Rod

M106330 / M107263

BE 08/04/21

2-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod

A/R Aluminum Rod

M106330

BE 08/04/21

3-Grind welds flush to Fwd cap on top surface only.

4-Grind cross bolt welds flush as per Dwg D3274. Masking Tape access to inside of the skidtube

5-Counterbore 5/16" x 0.750" deep as per Dwg D3274. Use DT8743 visual aid Jig and deburr.

328-422

14.0

QC5

WELD INSPECTION



Comment: Inspect weld and Counterbore. Inspect for foreign objects as per QSI 024

15.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M107550

HD 08-04-24

16.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

17.0

D3415041

Nut Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D3415-041 Nut Plate

B 33842

REV. D

328890A  
D206642545  
24/04/2008  
S.109  
#1 320.4  
#2 30m  
#3  
#4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 10/11/2006 10:27:55 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

CCR264SS33

Cherry Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 CCR264SS3-3 Rivet

*MA 106825*

19.0

CR3212403

Cherry Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 CR3212-4-03 Rivet

*MA 15918* *Red D see attached*

20.0

D26483

Wearpad



Comment: Qty.: 9.0000 Each(s)/Unit Total: 9.0000 Each(s)

Pick:

Qty Part Number Description Batch

9 D2648-3 Wearpad

*B 34591*

21.0

D265615

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2656-15 Wearshoe

*B 34596*

22.0

D265623

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2656-23 Wearshoe

*B 34597*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 10/11/2006 10:27:55 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

23.0

D265635

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2656-35 Wearshoe

*B32873*

24.0

D32871

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D3287-1 Wearshoe

*D20889*

25.0

D34291



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D3429-1 Wearpad

*B34609*

*Rev D  
see attached*

26.0

AN960C10L

Washer



Comment: Qty.: 78.0000 Each(s)/Unit Total: 78.0000 Each(s)

Pick:

Qty Part Number Description Batch

78 AN960C10L Washer

*M107823*

27.0

MS27039C108

SCREW



Comment: Qty.: 78.0000 Each(s)/Unit Total: 78.0000 Each(s)

Pick:

Qty Part Number Description Batch

78 MS27039C1-08Screw

*M19185*

28.0

NAS1330C3KB116

Insert



Comment: Qty.: 78.0000 Each(s)/Unit Total: 78.0000 Each(s)

Pick:

Qty Part Number Description Batch

78 NAS1330C3KB116 Inserts

*M17524*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 10/11/2006 10:27:55 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

29.0

NAS1515H3L

WASHER



Comment: Qty.: 78.0000 Each(s)/Unit Total: 78.0000 Each(s)

Pick:

Qty Part Number Description Batch

78 NAS1515H3L Washer *M106516*

30.0

D34131

Ring



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D3413-1 Ring *B33949*

31.0

AN4C5A

BOLT



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 AN4C5A Bolt *M104936*

*Rev D  
see attached  
U*

32.0

AN960C416L

WASHER



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 AN960C416L Washer *M107008*

33.0

NAS1515H4L

Inventory



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 NAS1515H4L Washer

34.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2646 Aft Cap

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Date: Wednesday, 10/11/2006 10:27:56 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

AN960C10L

washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 AN960C10L

Washer

36.0

MS27039C108

SCREW



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 MS27039C1-08Screw

37.0

NAS1515H3L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 NAS1515H3L

Washer

38.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

A/RN/ALPS-3

2-Install inserts & wearpads as per Dwg D3274. Use a drop of Sikaflex inside insert holes and a layer of sikaflex between wearplates and skidtube.

A/R Sikaflex-291

Sikaflex expire date:

3-Install ring as per Dwg D3274

A/R Sikaflex-291

Sikaflex expire date:

4-Inspect for foreign objects as per QSI 024

5-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3

Batch:

6-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

*Revised  
see H24411  
u*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 10/11/2006 10:27:56 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

A/R Sikaflex-291 \_\_\_\_\_  
Sikaflex expire date: \_\_\_\_\_

39.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

40.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN <b>CP</b>	DRAWN BY <b>CP</b>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3274	REV. C SHEET 1 OF 4
DATE 05.03.16		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	

**RELEASED**  
05-09-06 *[Signature]*

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
9	9	D2648-3	WEARPAD
12	12	D2649	CROSS BOLT SPACER
1	1	D2656-15	WEARSHOE
1	1	D2656-23	WEARSHOE
1	1	D2656-35	WEARSHOE
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3287-1	WEARSHOE
1	1	D2646	AFT CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3429-1	WEARPAD
78	78	NAS1330C3KB116	INSERT
80	80	NAS1515H3L	WASHER
1	1	NAS1515H4	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
80	80	MS27039C1-08	SCREW
1	1	AN4C5A	BOLT

**GENERAL NOTES:**

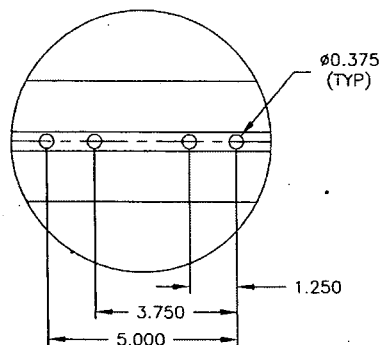
1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL 'E' (Ø0.250 REF) AND C'SINK Ø0.391x100° FOR NAS1330C3KB116 INSERT USING DT3274-1T2 BEFORE FINISH. INSTALL NAS1330C3KB116 INSERTS AFTER FINISH WITH LPS LABORATORIES "LPS-3".
8. WEARPLATES TO BE INSTALLED WITH A LAYER OF SIKAFLEX-241/-291 ADHESIVE BETWEEN WEARPLATES AND SKIDTUBE.
9. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DESGREASER.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. **28890A**

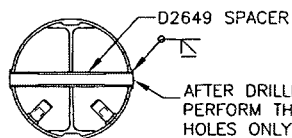
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# **DETAIL A: DRILL DETAIL**

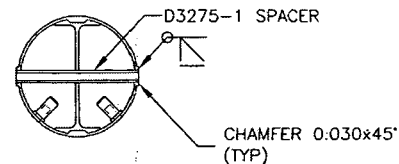


## **DETAIL B** FOR 0.375 HOLES ONLY

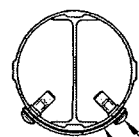


- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR 0.375  
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. C'BORE TO 0.313x0.75 DEEP

## **DETAIL C** FOR 0.313 HOLES ONLY



## **DETAIL D**



- NAS1330C3KB116 INSERT (1)  
MS27039C1-08 SCREW (1)  
NAS1515H3L WASHER (1)  
(78 PLACES)  
WEARPAD/WEARSHOE (REF)

## **DETAIL E**

D2646 CAP  
SEAL WITH  
SIKAFLEX-241/291  
ADHESIVE

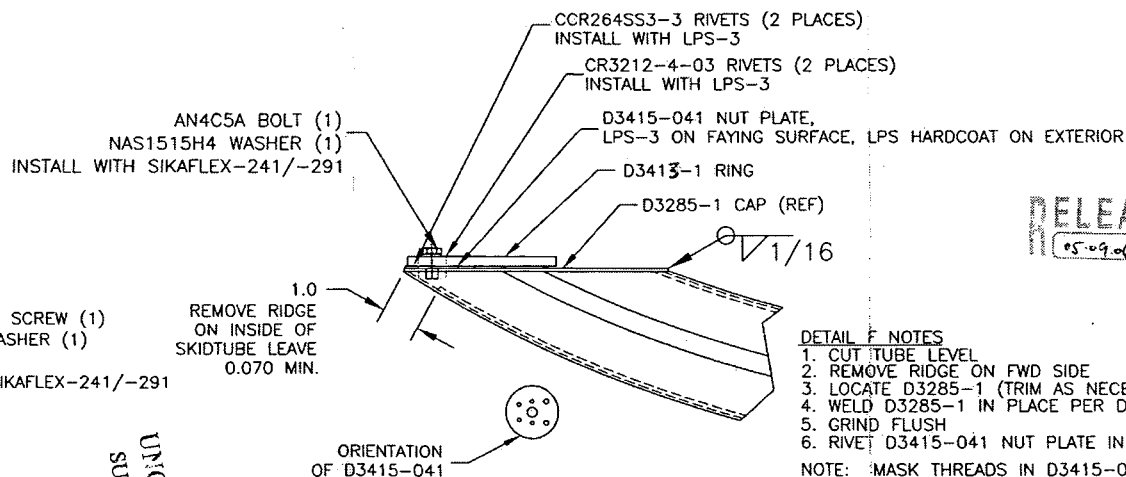
- MS27039C1-08 SCREW (1)  
NAS1515H3L WASHER (1)  
(2 PLACES)  
INSTALL WITH SIKAFLEX-241/-291

0.208 (2 PLACES)  
DRILL PRIOR TO INSTALLING  
D2646 CAP

BORE OUT END OF SKIDTUBE  
TO 0.75 DEPTH AND 0.070 WALL

NO. 28840A  
WORK ORDER  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
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RETURN TO  
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## **DETAIL F: END FINISHING DETAIL**

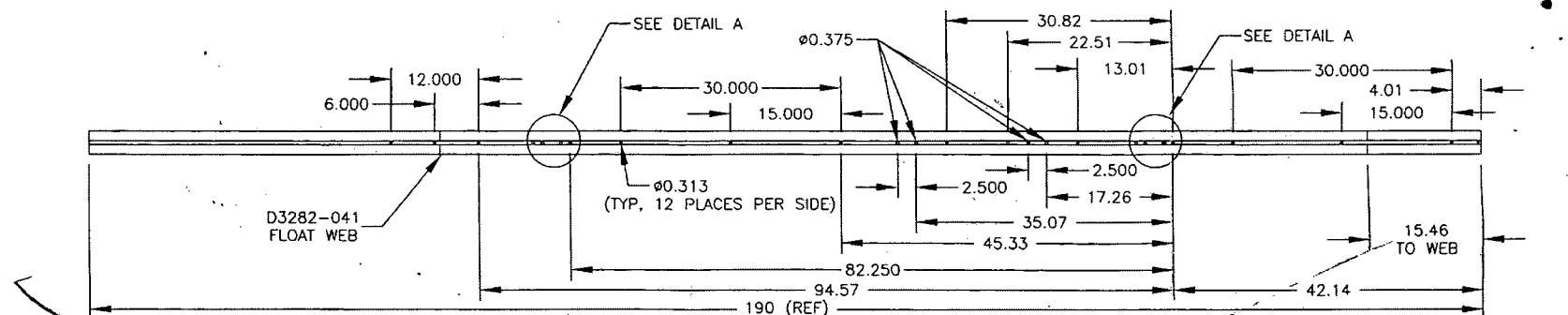


### **DETAIL F NOTES**

1. CUT TUBE LEVEL
  2. REMOVE RIDGE ON FWD SIDE
  3. LOCATE D3285-1 (TRIM AS NECESSARY)
  4. WELD D3285-1 IN PLACE PER DART QSI 004
  5. GRIND FLUSH
  6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

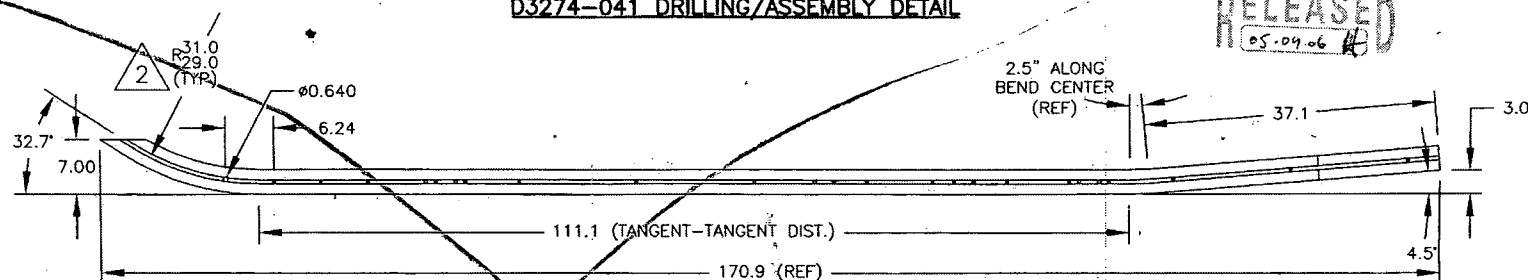
RELEASED  
05-09-06

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CHECKED	APPROVED	CP	CP	DRAWING NO.	REV. C
DATE	05.03.16			D3274	SHEET 2 OF 4
				TITLE	SCALE
				SKIDTUBE ASSEMBLY	1 TO 3

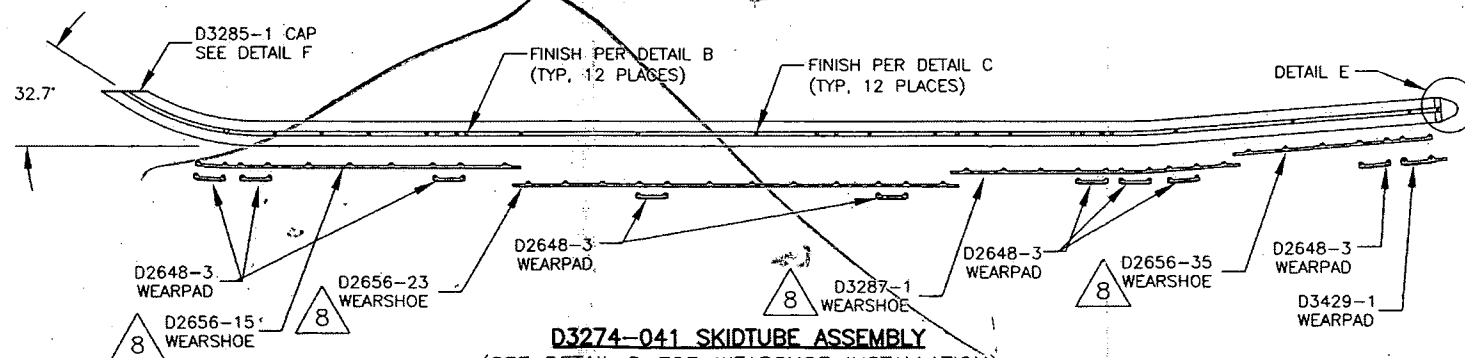


**D3274-041 DRILLING/ASSEMBLY DETAIL**

RELEASED  
05.09.06



**D3274-041 BEND/DRILLING DETAIL**



**D3274-041 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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WORK ORDER  
NO. 28890A

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DATE 05.03.16		TITLE SKIDTUBE ASSEMBLY		REV. C SHEET 3 OF 4 SCALE 1:15





NO. 146

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliot  
Job number: 37704A  
Part number: D058 612 041  
Description: OH-SG skid tube  
Welding Process: Tig ☒ Mig ☐  
Base material: Aluminium  
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐  
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐  
Undercut: pass ☒ fail ☐  
Pin holes: pass ☒ fail ☐  
Overlap (cold lap): pass ☒ fail ☐  
Porosity (surface): pass ☒ fail ☐  
Coloration: pass ☒ fail ☐

Qualifier Pet. Dwyer Date of Test Coupon 08-03-28

Welder Barclay Elliot Date of Test Coupon 08-03-28

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date: Friday, 25/04/2008 11:10:51 AM  
 User: Linda Lacelle

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	FLOAT SKIDTUBE ASSEMBLY
<b>Job Number</b> :	28890A	<b>Part Number</b> :	D206642545
<b>Estimate Number</b> :	12548	<b>Drawing Number</b> :	D3274 REV <i>FD U</i>
<b>P.O. Number</b> :		<b>Project Number</b> :	N/A
<b>This Issue</b> :	25/04/2008 <b>S.O. No.</b> :	<b>Drawing Revision</b> :	C
<b>Prsht Rev.</b> :	NC	<b>Material</b> :	
<b>First Issue</b> :	11/10/2006 <b>Type</b> :	<b>Due Date</b> :	05/11/2006
<b>Previous Run</b> :	SKIDTUBES	<b>Qty:</b>	1 <b>Um:</b> Each
<b>Written By</b> :	<i>[Signature]</i>		
<b>Checked &amp; Approved By</b> :	<i>[Signature]</i>		
<b>Comment</b> :	Est Rev:A New Issue 06-10-06 JLM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
16.0	QC3	INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*BR 08-04-25*

17.0	D3415041	Nut Plate
------	----------	-----------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D3415-041	Nut Plate	<i>B33842</i>

*BR.*

18.0	CCR264SS33	Cherry Rivet
------	------------	--------------

*\**

Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
2	CCR264SS3-3	Rivet	<i>M 106825</i>

*BR.*

19.0	CR3212403	Cherry Rivet
------	-----------	--------------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
2	CR3212-4-03	Rivet	<i>M15918</i>

*BR**BR 08-04-28*

Date: Friday, 25/04/2008 11:10:51 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

20.0

ALS71032130

Insert



Comment: Qty.: 78.0000 Each(s)/Unit Total : 78.0000 Each(s)

Insert

Batch: M105855

BL

21.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

A/RN/ALPS-3

M104251

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R Sikaflex-291

M107804

Sikaflex expire date:

08-10

BL 08-04-25

22.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect Nut Plate & Inserts

Sodou/25 AD

23.0

AN3C4A

BOLT



Comment: Qty.: 80.0000 Each(s)/Unit Total : 80.0000 Each(s)

BOLT

Batch: M107715

BL

24.0

D353515

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch: B36653

BL

25.0

D353523

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch: B35218

BL

BL 08-04-28

AD

Date: Friday, 25/04/2008 11:10:51 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

26.0	D353535	Wearshoe
------	---------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch: B37625

BR

27.0	D353539	Wearshoe
------	---------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch: B37277

BR

28.0	D353615	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

GASKET

Batch: B33964

BR

29.0	D353623	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

GASKET

Batch: B33965

BR

30.0	D353635	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

GASKET

Batch: B38183

BR

31.0	D353639	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

GASKET

Batch: B33966

BR

32.0	D35371	Wearpad
------	--------	---------



Comment: Qty.: 9.0000 Each(s)/Unit Total : 9.0000 Each(s)

WEARPAD

Batch: B36426

M. h 08-04-29

BR 08-04-28

Date: Friday, 25/04/2008 11:10:51 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

33.0

D35373

Wearpad



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
WEARPAD

B 3388

BR.

34.0

AN960C10L

washer



Comment: Qty.: 80.0000 Each(s)/Unit Total : 80.0000 Each(s)  
Pick:

Qty Part Number Description Batch  
80 AN960C10L Washer

M 107023

BR.

35.0

D36721

Phenolic Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)  
Washer

batch B 34470

BR.

36.0

D34131

Ring



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Pick:

Qty Part Number Description Batch  
1 D3413-1 Ring

B 33949

BR.

37.0

AN4C5A

BOLT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Pick:

Qty Part Number Description Batch  
1 AN4C5A Bolt

M 104936

BR.

38.0

AN960C416L

WASHER



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Pick:

Qty Part Number Description Batch  
1 AN960C416 Washer

M 107008

BR.

BR 08-04-08 D.

Date: Friday, 25/04/2008 11:10:51 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

39.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2646

Aft Cap

B37755

BR

40.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



(1X)

Comment: HAND FINISHING RESOURCE #1

2-Install wearpads & gaskets as per Dwg D3274.

3-Install ring as per Dwg D3274

A/R Sikaflex-291

Sikaflex expire date:

M107804  
08/10

4-Inspect for foreign objects as per QSI 024

5-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3

Batch:

M105005

6-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R Sikaflex-291

Sikaflex expire date:

M107804  
08/10

M.H

08/04/29

41.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

A/RN/ALPS-3

M105005

2-Install inserts & wearpads as per Dwg D3274. Use a drop of Sikaflex inside insert holes and a layer of sikaflex between wearplates and skidtube.

A/R Sikaflex-291

Sikaflex expire date:

M107804  
08-10

BR 08-04-28

3-Install ring as per Dwg D3274

A/R Sikaflex-291

Sikaflex expire date:

M107804  
08-10

4-Inspect for foreign objects as per QSI 024

M.H

08/04/29 (1X)

Date: Friday, 25/04/2008 11:10:51 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FLOAT SKIDTUBE ASSEMBLY

Job Number: 28890A

Part Number: D206642545

Job Number:



Seq. #:

Machine Or Operation:

Description :

5-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3

Batch:

M105005

6-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R Sikaflex-291

Sikaflex expire date:

M107804

08/10

M-1 08/04/2009

(1X)

42.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5 08/04/09

43.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/05/09

Job Completion



PACKAGING

P.P.P. 028890

08/04/30

MF 08-05-01

**DART**

DESIGN <b>CP</b>	DRAWN BY <b>PH</b>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <b>[Signature]</b>	APPROVED <b>[Signature]</b>	DRAWING NO. <b>D3274</b>	REV. D SHEET 1 OF 4
DATE <b>06.12.19</b>		TITLE <b>SKIDTUBE ASSEMBLY</b>	SCALE <b>NTS</b>
<b>A</b>	<b>04.03.15</b>	<b>NEW ISSUE</b>	
<b>B</b>	<b>04.08.09</b>	<b>MOVE SADDLE HOLE: 42.14 WAS 42.76</b>	
<b>C</b>	<b>05.03.16</b>	<b>ADD -043; NEW INSERTS</b>	
<b>D</b>	<b>06.12.19</b>	<b>NEW INSERTS, SS WEARSHOE + GASKET</b>	

**RELEASED**07.02.12 **[Signature]**

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

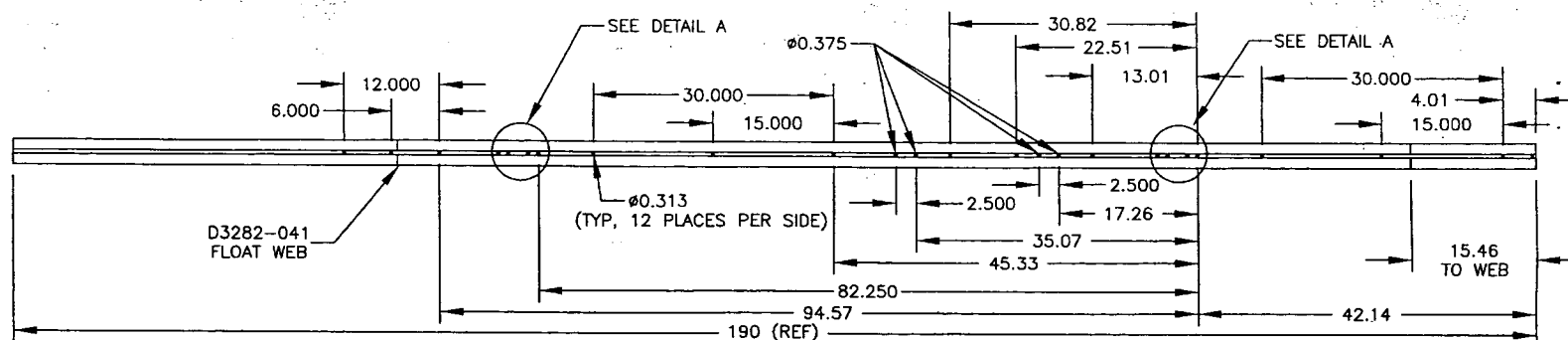
**GENERAL NOTES:**

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

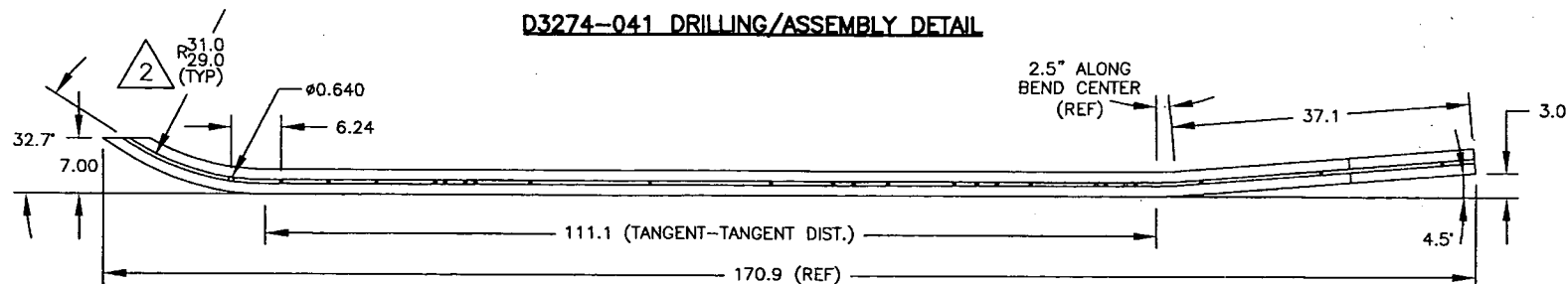
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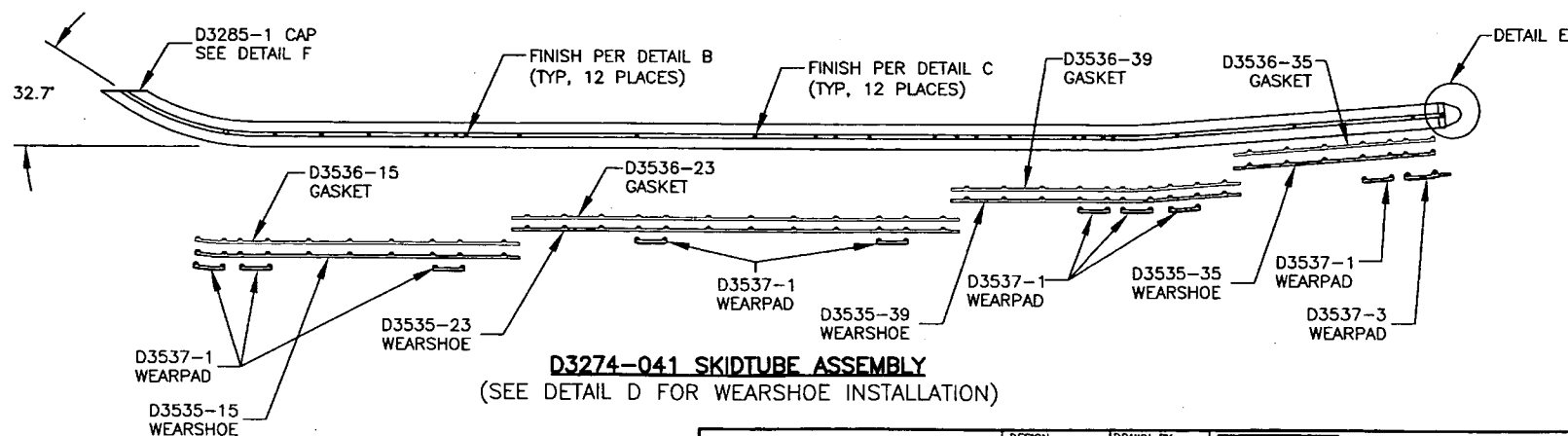




**D3274-041 DRILLING/ASSEMBLY DETAIL**



**D3274-041 BEND/DRILLING DETAIL**



**D3274-041 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

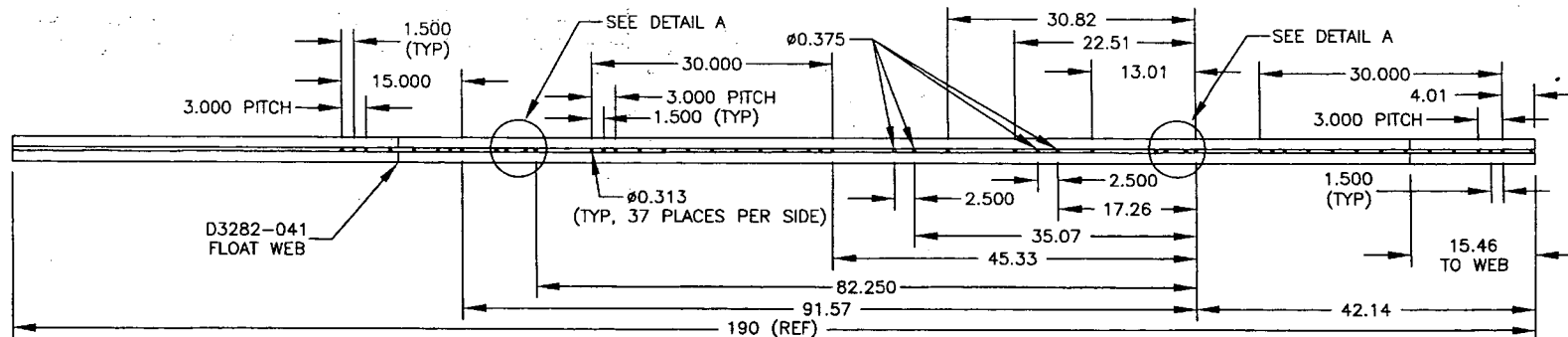
RELEASED

07.02.12

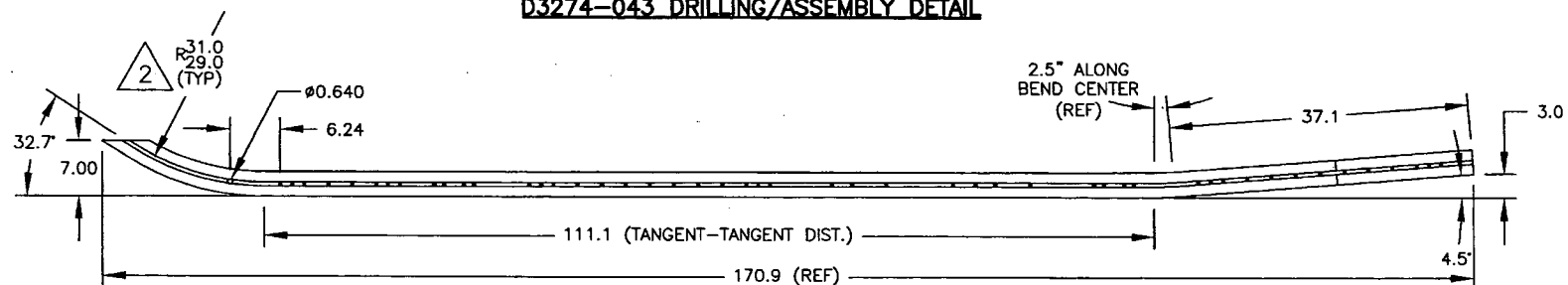
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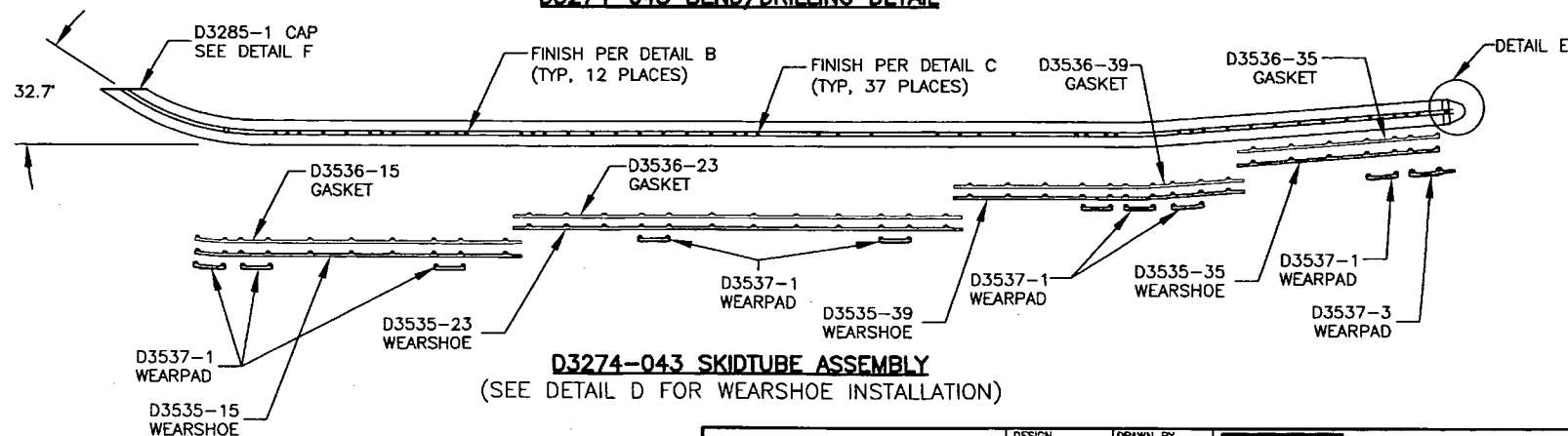
DESIGN	CP	DRAWN BY	PH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, MA
CHECKED	H	APPROVED	H	DRAWING NO. D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D SHEET 2 OF 4 SCALE 1:15



**D3274-043 DRILLING/ASSEMBLY DETAIL**



**D3274-043 BEND/DRILLING DETAIL**



**D3274-043 SKIDTUBE ASSEMBLY**

(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

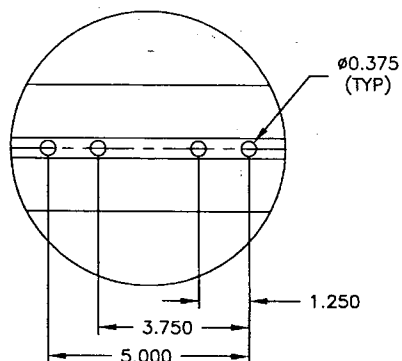
07.02.12

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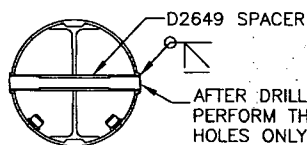
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CHECKED	HA	APPROVED	HA	PORT HADLOCK, WA	
DATE	06.12.19	DRAWING NO.	D3274		SHEET 3 OF 4
		TITLE	SKIDTUBE ASSEMBLY		SCALE 1:15

### DETAIL A: DRILL DETAIL

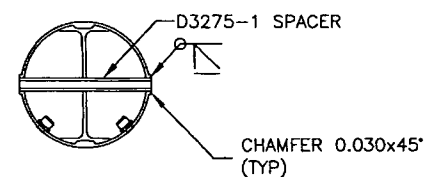


### DETAIL B FOR 0.375 HOLES ONLY

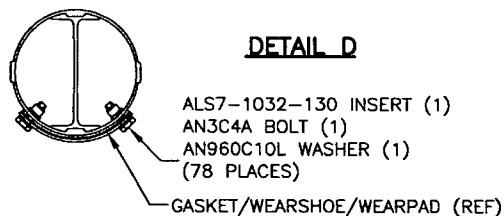


- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR 0.375  
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. C'BORE TO 0.313x0.75 DEEP

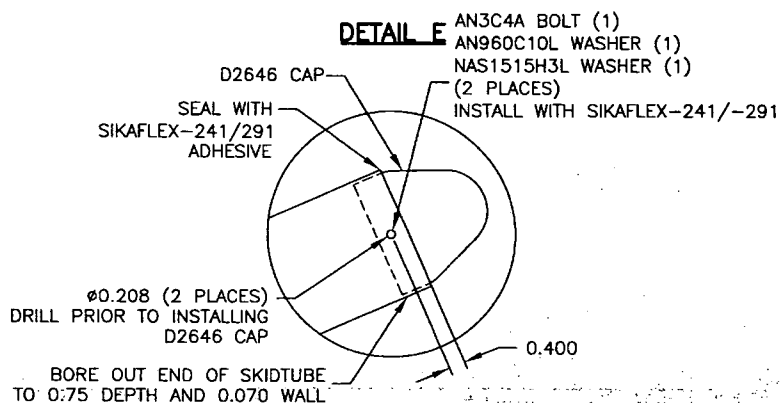
### DETAIL C FOR 0.313 HOLES ONLY



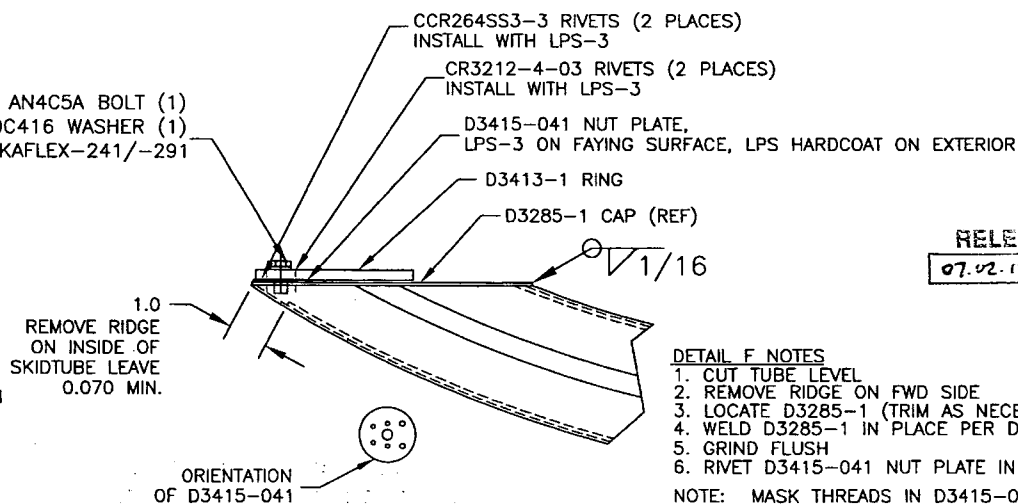
### DETAIL D



### DETAIL E



### DETAIL F: END FINISHING DETAIL



### DETAIL F NOTES

1. CUT TUBE LEVEL
  2. REMOVE RIDGE ON FWD SIDE
  3. LOCATE D3285-1 (TRIM AS NECESSARY)
  4. WELD D3285-1 IN PLACE PER DART QSI 004
  5. GRIND FLUSH
  6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

RELEASED  
07.02.12

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DESIGN	CP	DRAWN BY	PH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, MA
CHECKED	#	APPROVED	#	DRAWING NO. D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D SHEET 4 OF 4 SCALE 1:3

LTD Short Skid Tube D3274 Rev: C	Work Order: 28890A Part Number: D206-612-545 Page 1 of 1
--	--

# FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
500 (TYP.)	±0.18	1.500				
15.000		15.000				
3.000		3.000				
30.000		30.000				
30.82		30.82				
22.51		22.51				
13.01		13.01				
30.000		30.000				
4.01		3.99				
91.57		91.57				
82.250		82.250				
45.33		45.33				
35.07		35.07				
2.500		2.500				
17.26		17.26				
2.500		2.500				
42.14		42.14				

Measured by:  Date: 7-11-19	Audited by:  Date: 08/03/01	Prototype Approval:  Date: 08.21.02
---	---	---

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/RF	

